- 52. (Previously Presented) The method of claim 51, wherein said TAO variant is selected from the group consisting of:
 - (a) amino acid residues 1-320 of TA02;
 - (b) amino acid residues 1-416 of TA02; and
 - (c) amino acid residues 15-285 of TA02.
- 53. (Previously Presented) The method of claim 49 or 50, wherein said modulator increases MAP kinase signal transduction.
- 54. (Previously Presented) The method of claim 49 or 50, wherein said modulator decreases MAP kinase signal transduction.
- 55. (Previously Presented) The method of claim 49 or 50, wherein said MEK3 or MEK6 activation is indicated by MEK3 or MEK6 phosphorylation.
- 56. (Previously Presented) The method of claim 55, wherein a decrease in MEK3 or MEK6 phosphorylation indicates a decrease in *MAP* kinase signal transduction.
- 57. (Previously Presented) The method of claim 55, wherein an increase in MEK3 or MEK6 phosphorylation indicates an increase in *MAP* kinase signal transduction.
- 58. (Previously Presented) The method of claim 49 or 50, wherein said agent is an antibody or antigen-binding fragment thereof.
- 59. (Previously Presented) The method of claim 58, wherein said antibody is a monoclonal antibody.
- 60. (Previously Presented) The method of claim 50, wherein said agent is an antisense polynucleotide or a ribozyme.
- 61. (Previously Presented) The method of claim 50, wherein said MEK3 or MEK6 activation is indicated by p38 activity.

- 62. (Previously Presented) The method of claim 61, wherein said p38 activity is indicated by p38 phosphorylation.
- 63. (Previously Presented) The method of claim 62, wherein a decrease in p38 phosphorylation indicates a decrease in MAP kinase signal transduction.
- 64. (Previously Presented) The method of claim 62, wherein an increase in p38 phosphorylation indicates an increase in MAP kinase signal transduction.
- 65. (Previously Presented) The method of claim 50, wherein said MEK3 or MEK6 activation is indicated by expression of a reporter gene under the control of a MEK3 or MEK6-dependent promoter.
- 66. (Previously Presented) The method of claim 65, wherein said MEK3 or MEK6-dependent promoter is ATF2.
- 67. (Previously Presented) The method of claim 49 or 50, wherein the TAO2 polypeptide or variant thereof is contacted with a MEK3 polypeptide
- 68. (Previously Presented) The method of claim 49 or 50, wherein the TAO2 polypeptide or variant thereof is contacted with a MEK6 polypeptide
- 69. (New) The method of claim 51, wherein said TAO variant comprises the catalytic domain.